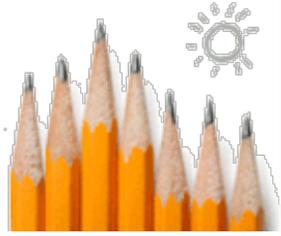


BEAL - SCHEMATIC DESIGN





Massachusetts School Building Authority

Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities

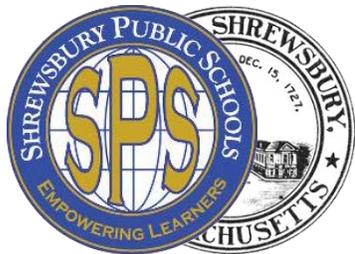


PMA Consultants



LAMOUREUX • PAGANO

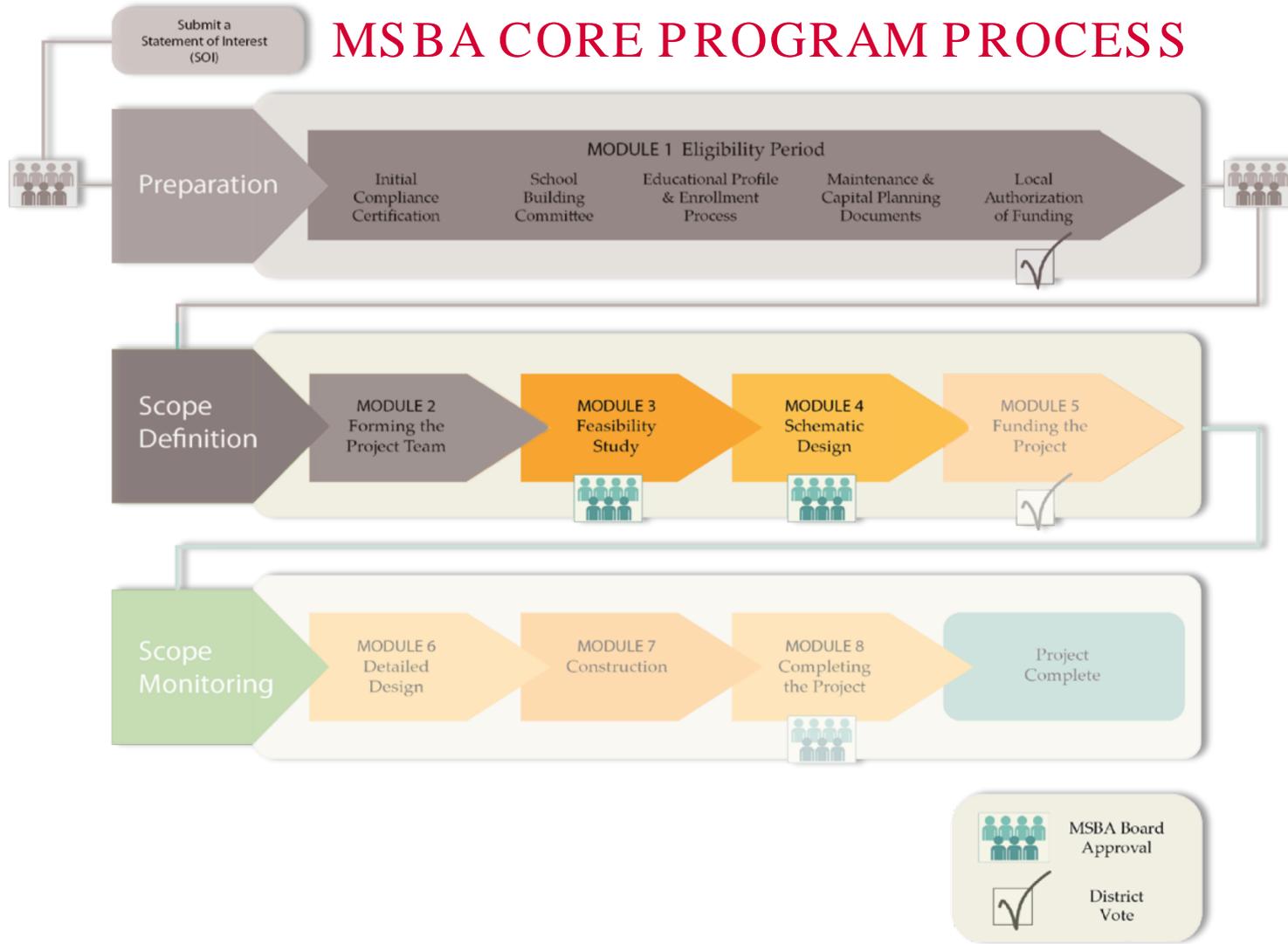
ARCHITECTS PROJECT MANAGERS



Beal Elementary School

School Building Committee

MSBA CORE PROGRAM PROCESS



MODULE 3: FEASIBILITY STUDY
 Preliminary Design Program
 Preferred Schematic Report
 Feb. 2018

MODULE 4: SCHEMATIC DESIGN
 Schematic Design
 DESE Submission
 Sept. 2018

MODULE 5: FUNDING THE PROJECT
 MSBA Scope & Budget Vote
 Town Meeting & Ballot Vote
 Nov. 2018

MODULE 6: DETAILED DESIGN
 Design Development
 Construction Documents
 Sept. 2019

MODULE 7: CONSTRUCTION
 Construction Administration
 Occupancy of Building
 Aug. 2021

DEVELOPED EDUCATIONAL PROGRAM

790 Students | 40 General Classrooms | K- 4 Elementary School

EXISTING BEAL EVALUATION

34,000 GSF | Constructed 1922 | 3.86 Acre Site

ALTERNATIVE SITE EVALUATION

31 Sites Reviewed | Shortlisted 6 Sites | Studied 2 Sites

OPTIONS DEVELOPMENT

South Street & Glavin Center Design Options | Four Options; Two For Each Site

PREFERRED SOLUTION

Glavin Center Selected as Preferred Option | Fulfilled All Programmatic Needs

SCHEMATIC DESIGN

Advanced Site & Building Designs | Gather Additional Site Information | Identify Scope & Budget

| | GRADE LEVELS # OF SECTIONS | DEDICATED MUSIC SPACES | DEDICATED ART SPACES | DEDICATED SPECIAL EDU. | DEDICATED E.L.L. |
|--|-------------------------------|---------------------------|-------------------------|---------------------------|---------------------|
|  <p>COOLIDGE</p> | K- 4 SECTIONS VARY | ○ | ● | ◐ | ◐ |
|  <p>PATON</p> | K- 4 SECTIONS VARY | ◐ | ◐ | ● | ◐ |
|  <p>SPRING</p> | K- 4 SECTIONS VARY | ● | ● | ● | ● |
|  <p>FLORAL</p> | 1- 4 SECTIONS VARY | ● | ◐ | ● | ◐ |
|  <p>BEAL</p> | K- 1 SECTIONS VARY | ◐ | ◐ | ◐ | ◐ |

DISTRICT WIDE FULL- DAY KINDERGARTEN IS CURRENTLY NOT ACHIEVABLE DUE TO SPATIAL LIMITATIONS.

K-4 CONFIGURATION

| | K- 4 SECTIONS PER GRADE | DEDICATED MUSIC SPACES | DEDICATED ART SPACES | DEDICATED SPECIAL EDU. | DEDICATED E.L.L. |
|--|----------------------------|---------------------------|-------------------------|---------------------------|---------------------|
|  COOLIDGE | K- 4 3 SECTIONS EACH | ● | ● | ● | ● |
|  PATON | K- 4 3 SECTIONS EACH | ● | ● | ● | ● |
|  SPRING | K- 4 3 SECTIONS EACH | ● | ● | ● | ● |
|  FLORAL | K- 4 6 SECTIONS EACH | ● | ● | ● | ● |
|  BEAL 2.0 | K- 4 8 SECTIONS EACH | ● | ● | ● | ● |

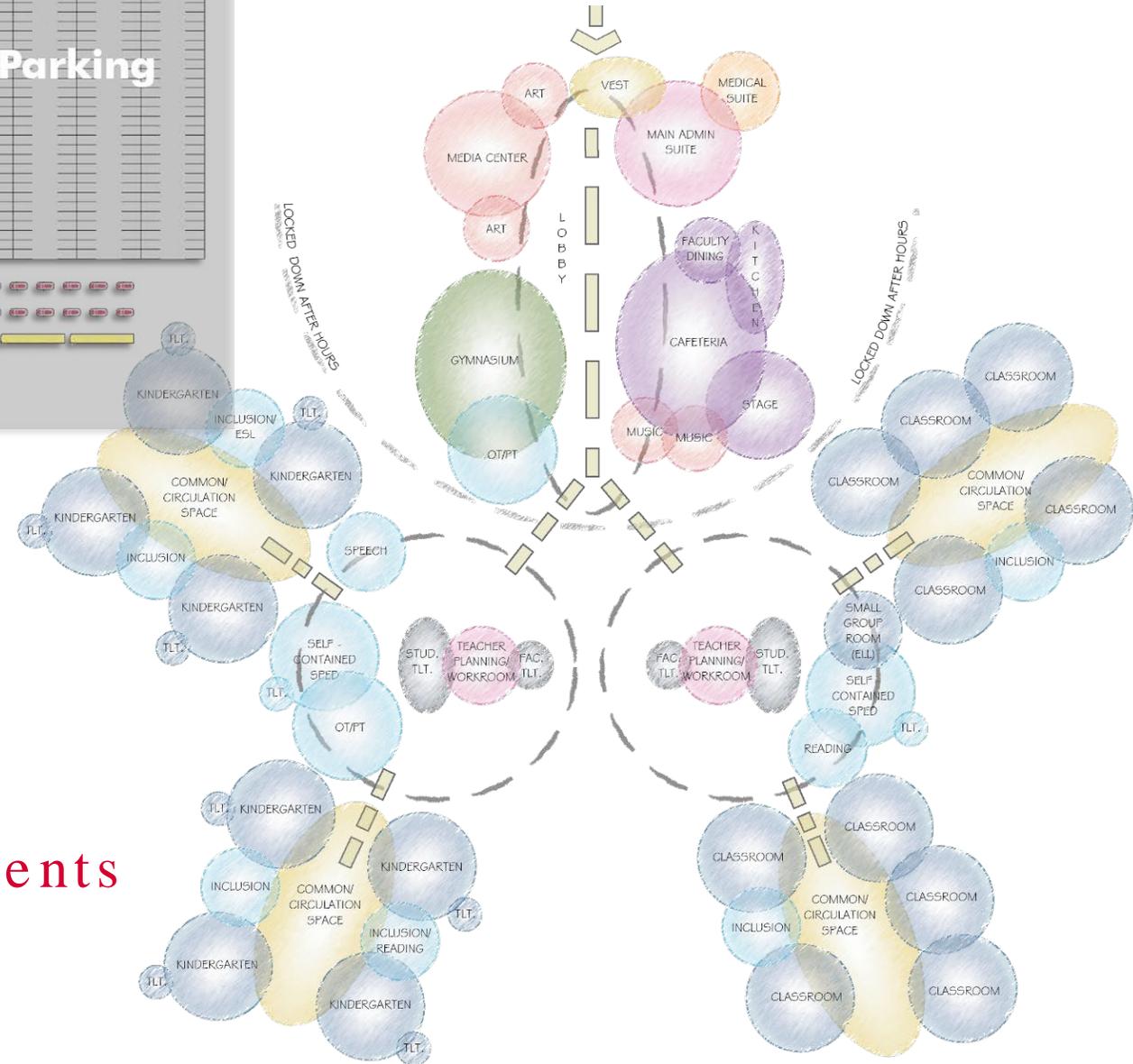
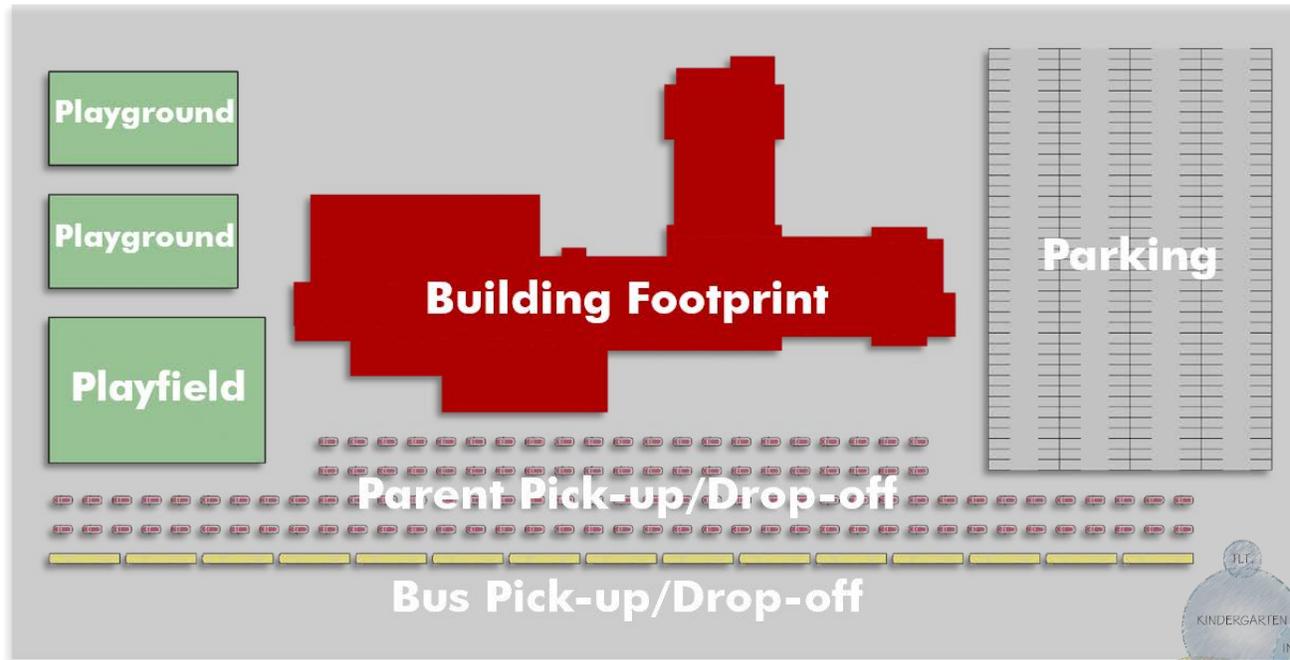
PARITY AMONGST ALL THE K- 4 SCHOOLS & DISTRICT WIDE FULL- DAY KINDERGARTEN IS ACHIEVED WITH CONSTRUCTION OF THE NEW BEAL ELEMENTARY SCHOOL



INFORMATION GATHERING



LEED
v4



- 790 Students | K- 4
- ± 142,000 GSF Building
- 120 Cars Pick- up/Drop- off
- 12- 14 Buildable Acres
- 130 Parking Spots
- 350 Total Spots for Special Events
- 12- 15 Buses

ACADEMIC



MSBA: 33,800 NSF
PROPOSED: 47,865 NSF

SPECIAL EDUCATION



MSBA: 9,060 NSF
PROPOSED: 13,310 NSF

ART/MUSIC



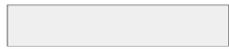
MSBA: 5,075 NSF
PROPOSED: 5,075 NSF

HEALTH & PHYSICAL EDUCATION



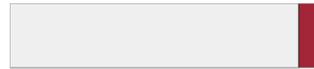
MSBA: 6,300 NSF
PROPOSED: 7,650 NSF

MEDIA CENTER



MSBA: 4,225 NSF
PROPOSED: 4,225 NSF

DINING & FOOD SERVICE



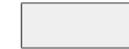
MSBA: 9,776 NSF
PROPOSED: 10,236 NSF

MEDICAL



MSBA: 710 NSF
PROPOSED: 906 NSF

ADMIN & GUIDANCE



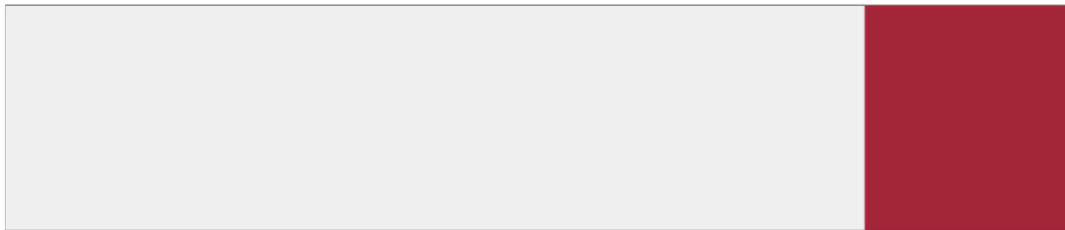
MSBA: 2,925 NSF
PROPOSED: 2,925 NSF

CUSTODIAL & MAINTENANCE



MSBA: 2,390 NSF
PROPOSED: 2,390 NSF

GROSSING FACTOR: WALLS, CORRIDORS, STAIRS, TOILETS,
MECHANICAL ROOMS, STORAGE ROOMS, JANITOR CLOSETS, ETC.



MSBA: 114,550 GSF
PROPOSED: 141,600 GSF

- ADDITIONAL AREA REQUIRED BY EDUCATIONAL PROGRAM
- TOTAL BUILDING AREA PER MSBA GUIDELINES 114,500 G.S.F.
- TOTAL BUILDING AREA REQUIRED BY EDUCATIONAL PROGRAM 141,600 G.S.F.

151,484 GSF

Original Program

146,201 GSF

5,283 GSF
PDP Reduction

142,736 GSF

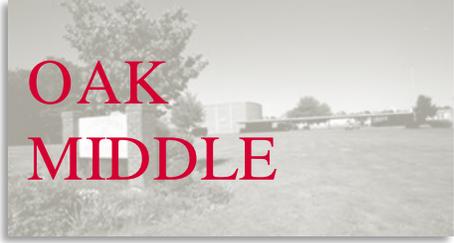
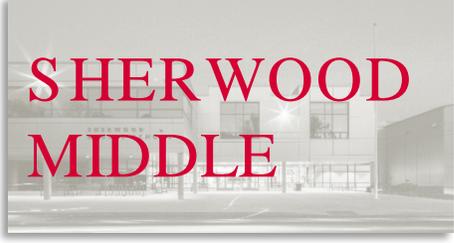
3,465 GSF
PSR Reduction

141,600 GSF

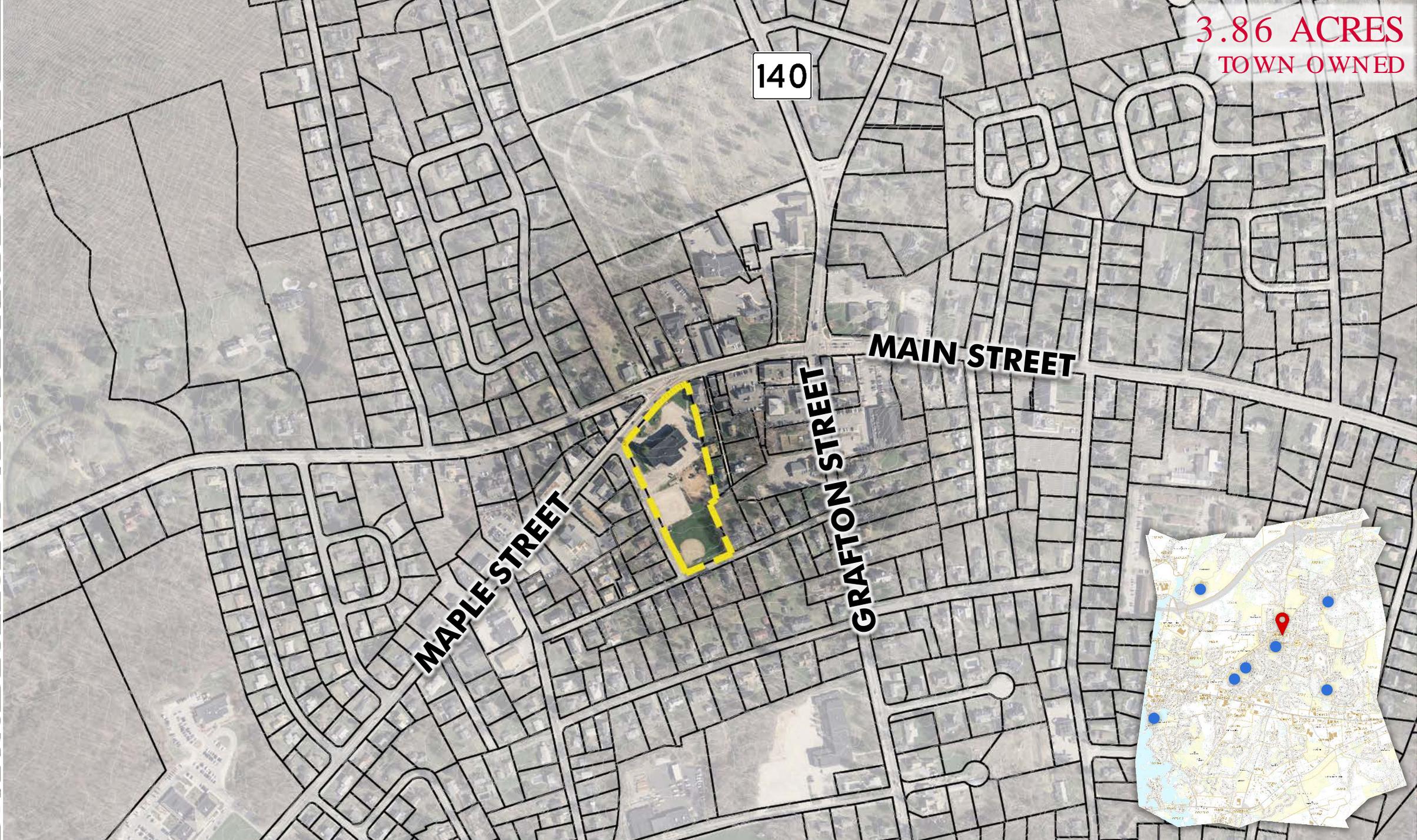
1,136 GSF
SD Reduction

9,884 GSF Total Overall Reduction

CURRENT CAPACITIES

| | COMPLETION DATE | DESIGN CAPACITY | CURRENT ENROLLMENT | % OVER CAPACITY |
|--|-----------------|-----------------|--------------------|-----------------|
|  FLORAL | 1997 | 660 | 750 | 14% |
|  HIGH SCHOOL | 2002 | 1475 | 1832 | 24% |
|  OAK MIDDLE | 2004 | 900 | 1009 | 12% |
|  SHERWOOD MIDDLE | 2013 | 900 | 967 | 7% |

EXISTING BEAL PROPERTY



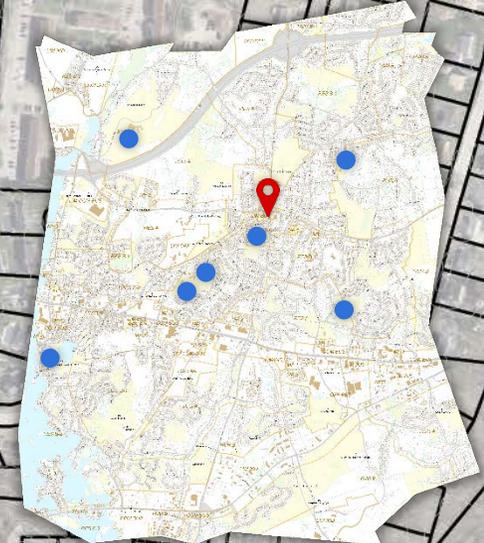
3.86 ACRES
TOWN OWNED

140

MAPLE STREET

GRAFTON STREET

MAIN STREET



BEAL NEW CONSTRUCTION

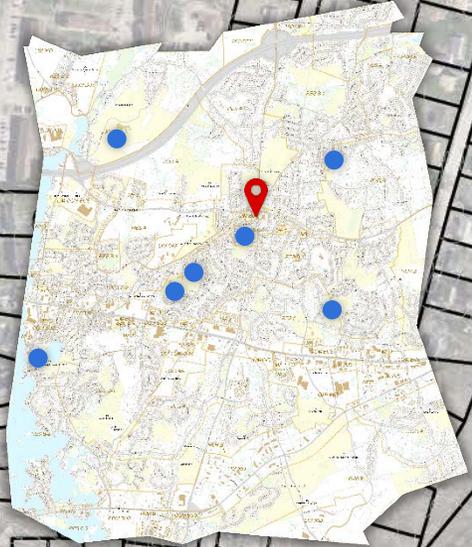
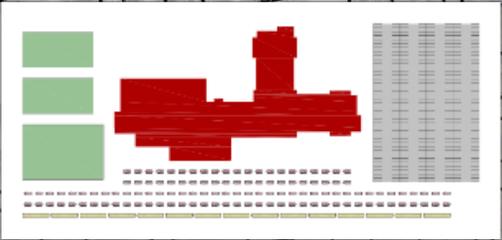
3.86 ACRES
TOWN OWNED

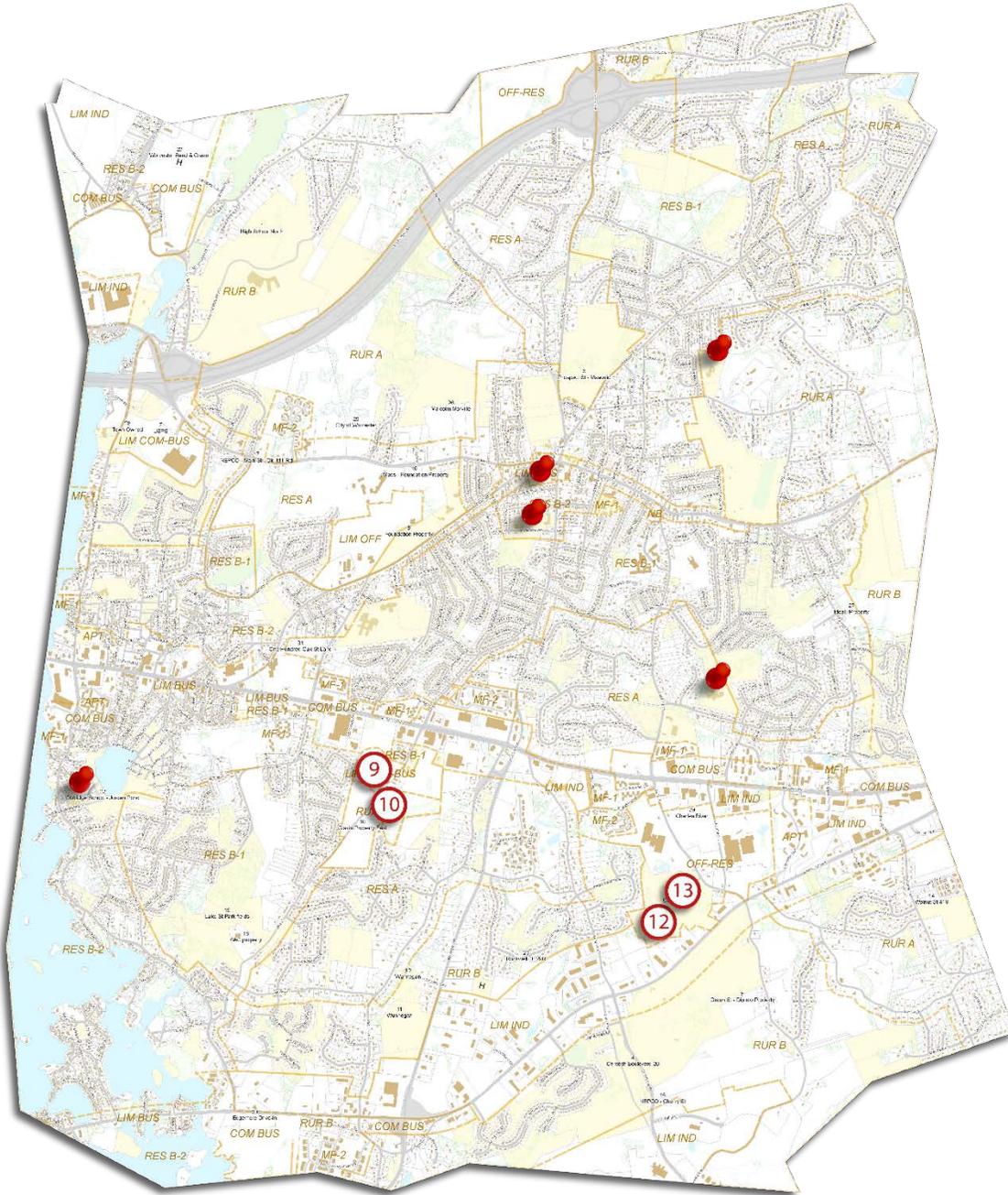
140

MAPLE STREET

MAIN STREET

GRAFTON STREET





- 01| Holden Street | Town Owned | 194.17 Acres
- 02| Boylston Street | 129.77 Acres
- 03| Prospect Street | Town Owned | 70.71 Acres
- 04| Centech Boulevard | Town Owned | 70.87 Acres
- 05| Green Street | 13.76 Acres
- 06| Green Street | 71.76 Acres
- 07| Main Street | 51.71 Acres
- 08| Maple Street | Town Owned | 19.7 Acres
- 09-10| Lake Street | 98.97 Acres
- 11| Grafton Street | Town Owned | 29.7 Acres
- 12-13| South Street | Town Owned | 60.89 Acres
- 14| Walnut Street | Town Owned | 24.7 Acres
- 15| Cherry Street | 22.0 Acres
- 16| Maple Avenue | 42.15 Acres
- 17| Main Street | 17.11 Acres
- 18| Lake Street | 9.3 Acres
- 19| Lake Street | Town Owned | 27.8 Acres
- 20| Rockwell Drive | 7.97 Acres
- 21| Farmington Drive | Town Owned | 5.89 Acres
- 22| Florence Street | Town Owned | 14.27 Acres
- 23| Holden Street | 113.1 Acres
- 24| Holden Street | 88.65 Acres
- 25| Main Street | 74.92 Acres
- 26| Main Street | 20.55 Acres
- 27| Walnut Street | 45.15 Acres
- 28| N. Quinsigamond Avenue | Town Owned | 4.84 Acres
- 29| South Street | 42.44 Acres
- 30| Hartford Turnpike | 56.57 Acres
- 31| Oak Street | 9.7 Acres

GLAVIN CENTER PROPERTY



GLAVIN CENTER PROPERTY



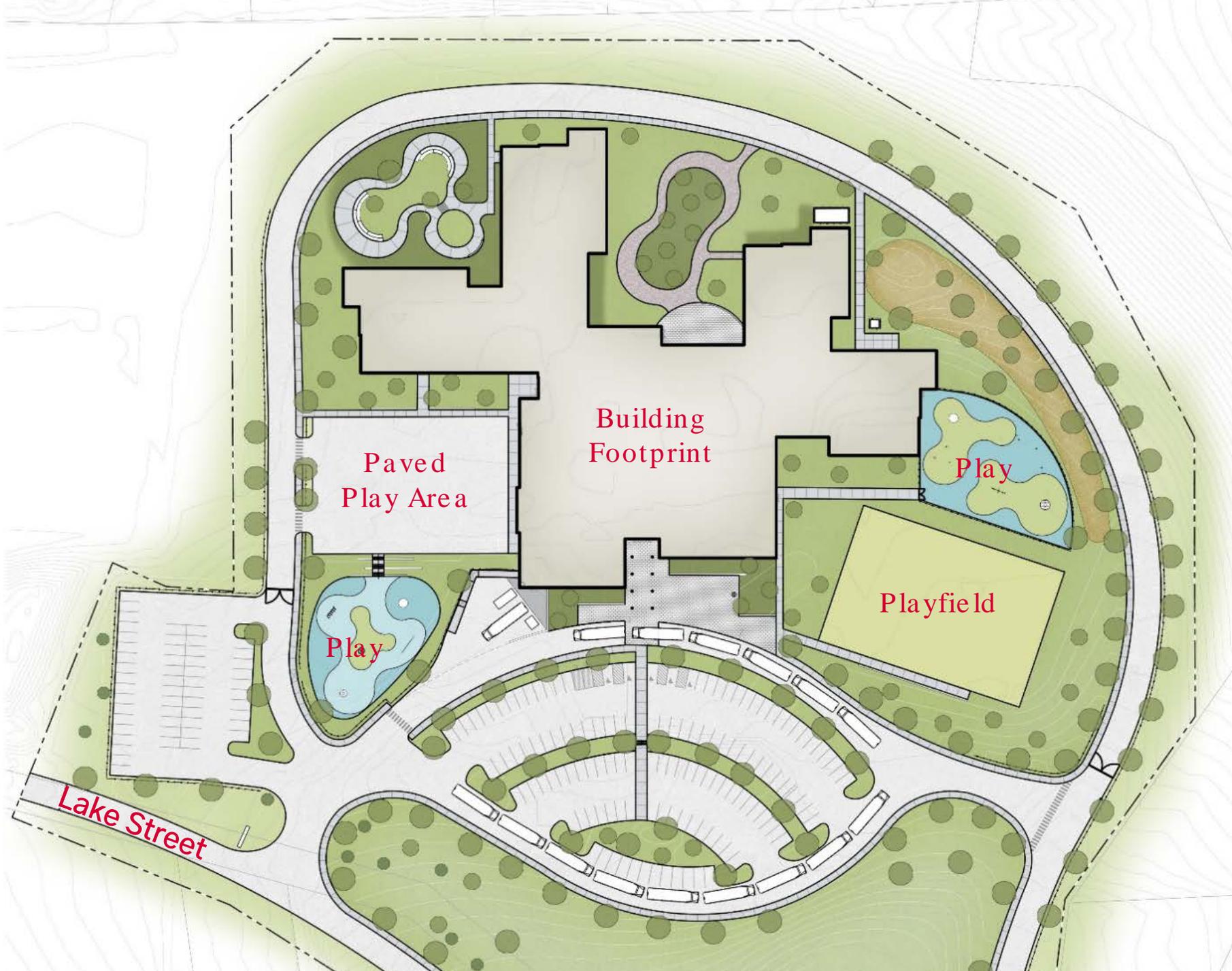
GLAVIN CENTER PROPERTY



SCHEMATIC DESIGN



SCHEMATIC DESIGN



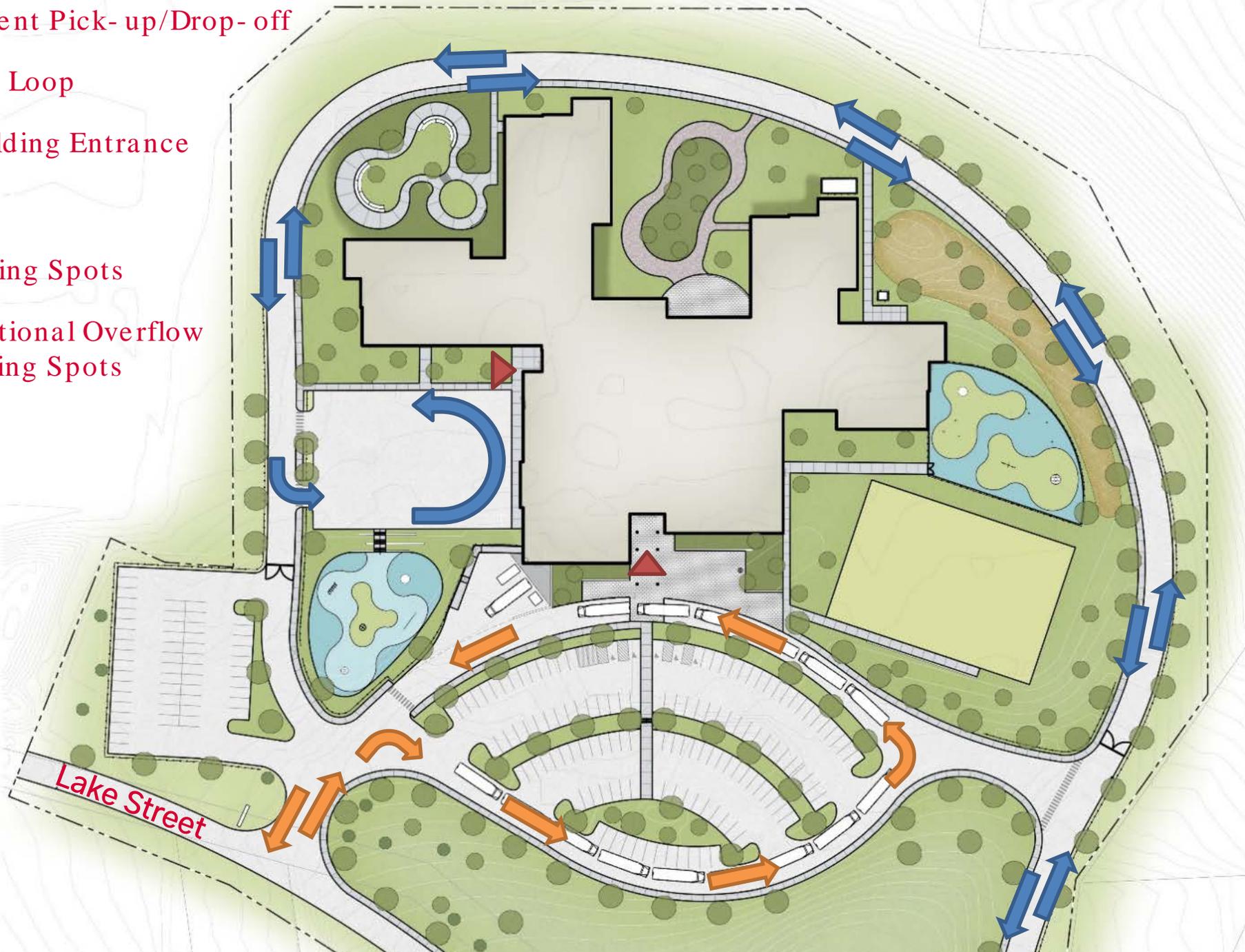
➡ Parent Pick-up/Drop-off

➡ Bus Loop

▲ Building Entrance

185 Parking Spots

170 Additional Overflow
Parking Spots

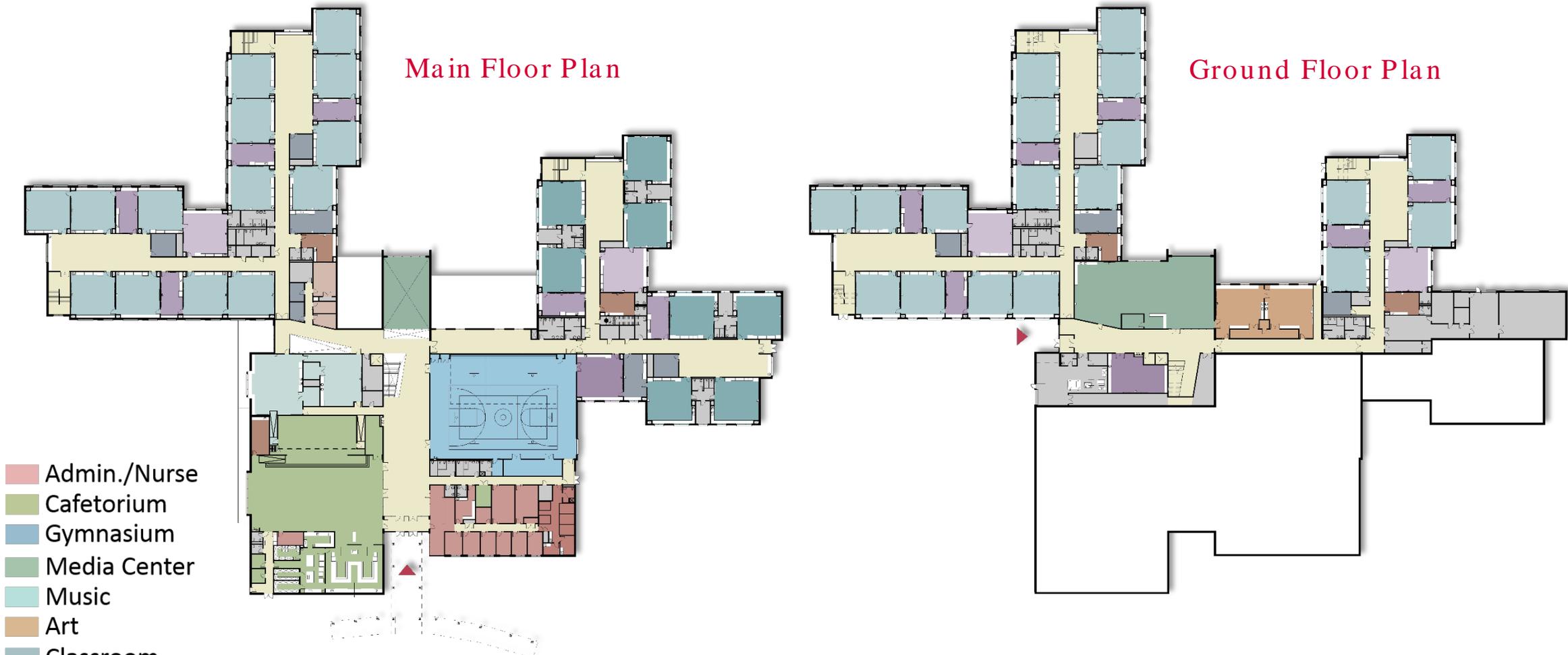


SCHEMATIC DESIGN



Main Floor Plan

Ground Floor Plan



- Admin./Nurse
- Cafetorium
- Gymnasium
- Media Center
- Music
- Art
- Classroom
- Special Ed./Support
- Circulation



Section Through Lobby

SCHEMATIC DESIGN



2011 - \$43,947,705

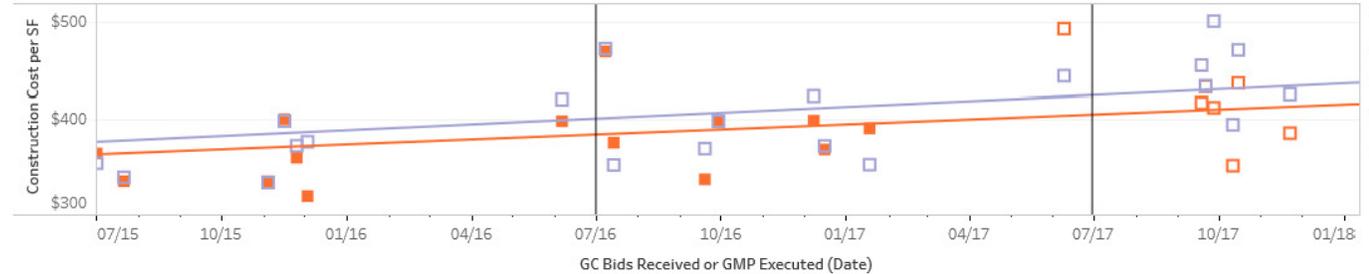
Capital Planning Data & Information: School Construction Costs

This chart includes construction costs for new construction projects as bid from FY 09 through FY 17, as well as construction cost estimates at preferred schematic and at schematic design for projects recently approved by the Board and expected to bid in FY 18 and FY 19. Additionally, the chart provides an inset with a closer look comparing the schematic design estimates to the bids received for FY 16, FY 17 and the first quarter of FY 18. Common economic indicators are included at the bottom of the chart.

To filter the data specific to a Contractor, Designer, and/or OPM, use the filters on the right to uncheck the boxes next to the categories you do not want shown. To uncheck all of the names, uncheck the box next to "All". Please note, for the common economic indicators lines to show, the "Null" box must remain checked. These filters act as "AND" filters when used in combination. (Ex: checking a contractor and a designer will filter to only those projects that had both that contractor and that designer.)

- Legend**
- 3% Escalation
 - PFA Amended
 - BID
 - SD
 - PSR
 - Average
 - BLS PPI
 - RLB Comparative Cost - Boston
 - MSBA Construction Funding

Construction Cost, Bid vs. SD

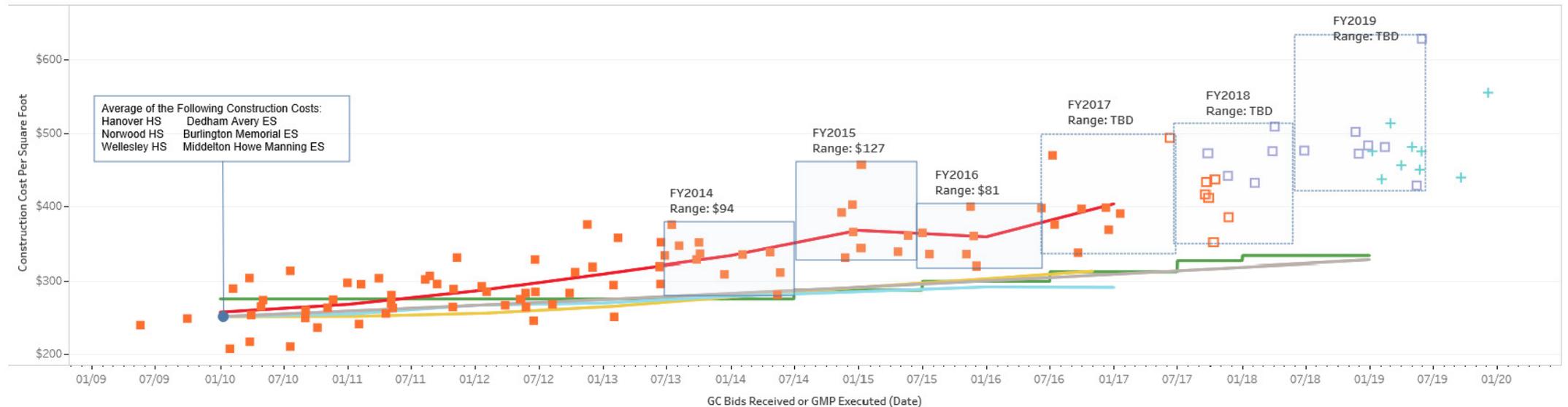


Contractor
(All)

Designer
(All)

OPM
(All)

School Construction Costs Compared to Common Economic Indicators



The information and data contained in this chart is based on the MSBA's review of construction cost estimates, contracts and other documentation provided by cities, towns, and regional school districts. This information and data is intended for informational purposes only. The data may have changed based on actual construction bids or contract amendments, for example, and the MSBA shall have no responsibility or duty to update any of the information. Please contact the Districts for the most current information. The MSBA hereby disclaims any and all liability and responsibility that

CONSTRUCTION COSTS



\$51,000,000

4.5% higher than bids

\$483 - 508/sq.ft.

DELIVERY METHOD



CM @ RISK PROJECTS

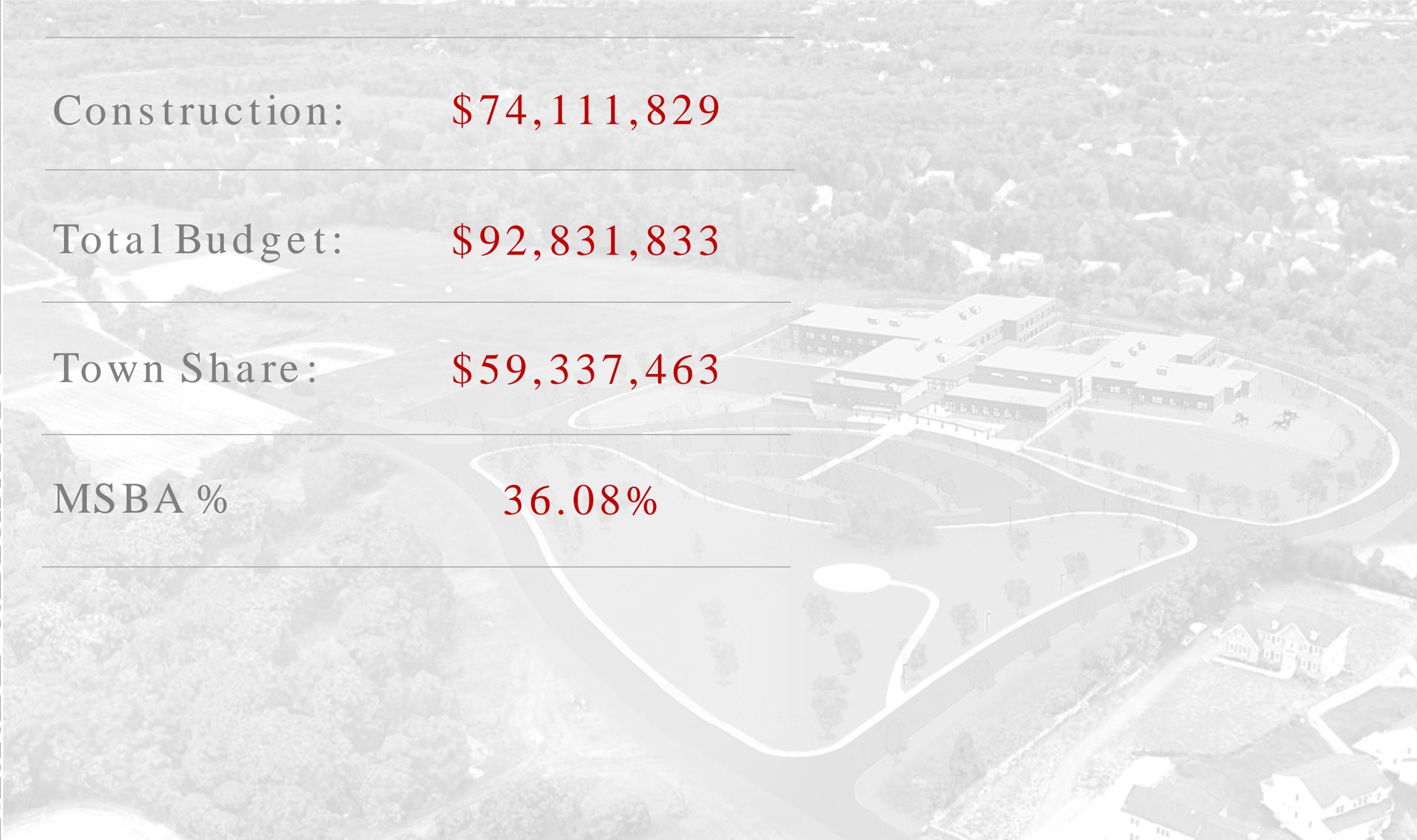


Construction: **\$74,111,829**

Total Budget: **\$92,831,833**

Town Share: **\$59,337,463**

MSBA % **36.08%**



SCHEMATIC DESIGN SUBMISSION | SEPTEMBER 12, 2018

TOWN MEETING VOTE | OCTOBER 22, 2018

MSBA PROJECT SCOPE & BUDGET VOTE | OCTOBER 31, 2018

BALLOT VOTE | NOVEMBER 6, 2018

NEXT STEPS

